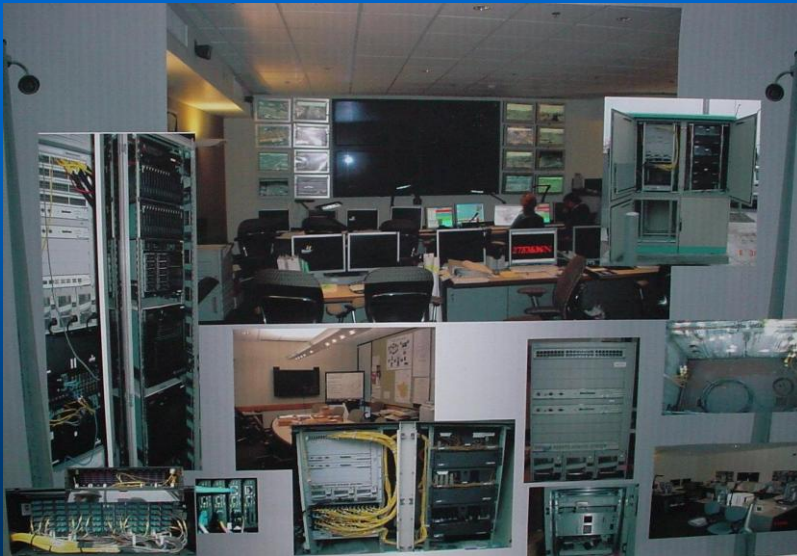








Intelligent Transportation Systems

Bryan Jones, TE
City Traffic Engineer

PUBLIC WORKS DEPARTMENT
CITY OF FRESNO



Intelligent Transportation Systems

-  The application of technology to build a responsive transportation system that will effectively and efficiently move goods and people within the Fresno-Clovis Region.
-  1995 - National ITS Plan was published.
-  1998 - Congress allocated \$1.2 billion for ITS related programs.
-  2001 - The San Joaquin Valley Intelligent Transportation System Strategic Deployment Plan was published, identifying the Fresno-Clovis Regional ITS Project and Fresno-Clovis area Signal Coordination as priority projects for Fresno County.

Intelligent Transportation Systems

San Joaquin Valley Regional ITS Plan

“The Intelligent Transportation Vision for San Joaquin Valley is to enhance the quality of life, mobility, and the environment through coordination, communication and the integration of ITS technologies into the valley’s transportation systems”

San Joaquin Valley ITS Strategic Deployment Plan, 2001

Intelligent Transportation Systems

ITS Program History!



 Phase 1 – 1999/2001

Blackstone Corridor Constructed.

(124 count fiber trunk line with 6 strands at each intersection)

 Phase 2 – 2001/2003

Traffic Operations Center Operational
Conduit & and Infrastructure Built
for Herndon, Chestnut, Ventura-Kings
Canyon.

 Phase 3 – 2006/2007

Fiber Optic Loop Installed,
Technology Deployed &
System Operational.

(168 count fiber trunk line with 6 strands at each intersection)

Intelligent Transportation Systems

Operations & Maintenance – Today!



ITS Program

Funded (~\$700k for O&M)



Operations &
Maintenance

Staffed with 7 Dedicated
ITS Staff



ITS Standards

Published (Feb 2008)



ITS Management Plan

Published (Jan 2009)



ITS Wireless Standards

Published (Oct 2009)



Traffic Synchronization

Underway!

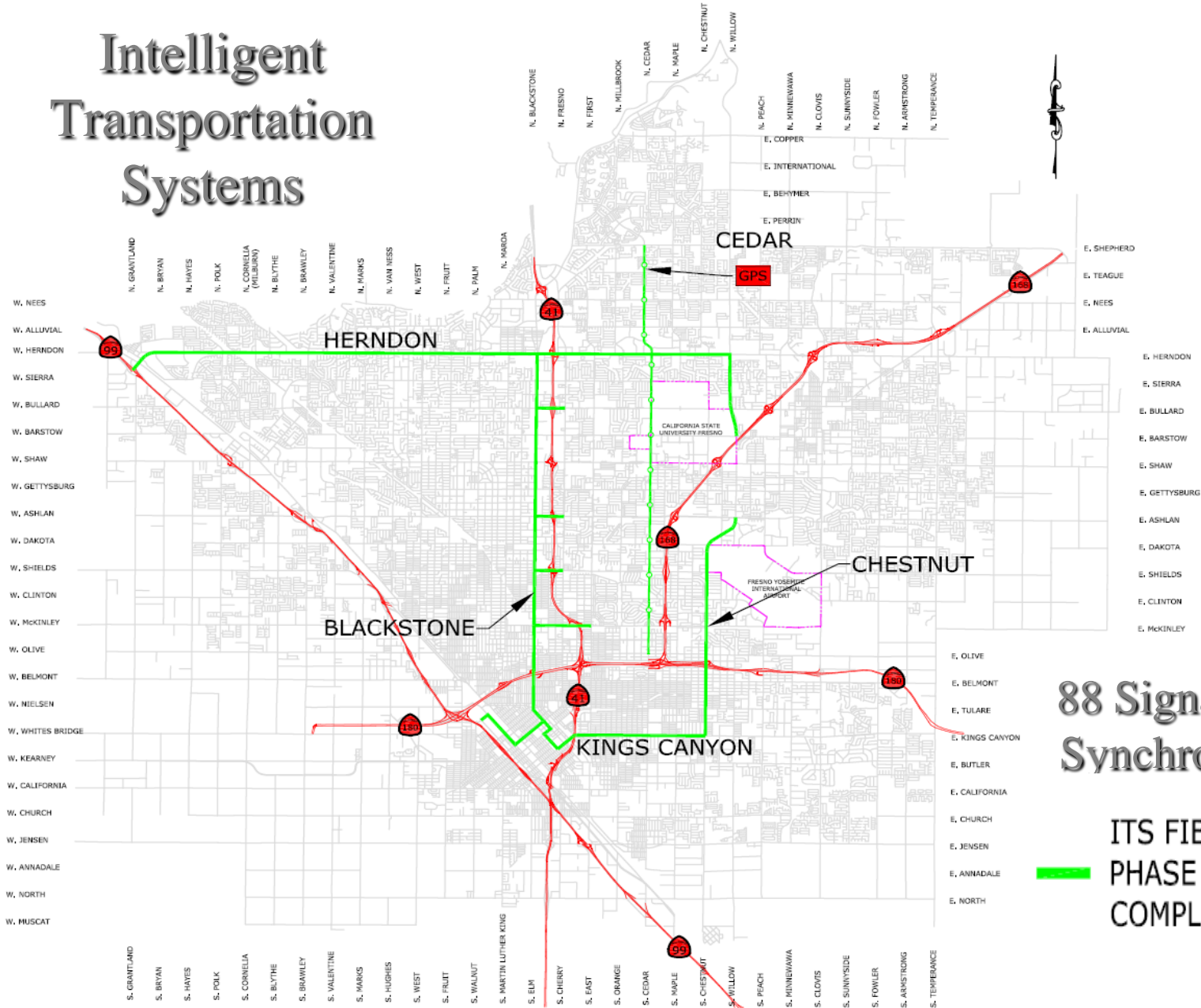
Intelligent Transportation Systems

Traffic Synchronization – Today!



- ✓ Herndon Ave Synchronized Willow to Golden State
- ✓ Blackstone Ave Synchronized Olive to Herndon
- ✓ Kings Canyon Synchronized Downtown to Chestnut
- ✓ Chestnut Ave Synchronized Kings Canyon to Shields
- ✓ Cedar Ave Synchronized Olive to Shepherd
- Herndon Ave Re-Synchronize Herndon from
Willow to Golden State is Next!

Intelligent Transportation Systems



Intelligent Transportation Systems

ITS Fiber Projects - 2010 to 2012!



Shaw Ave (East)

ITS Project is being designed from Highway 41 to Highway 168 (\$3.1 mil)



Shaw Ave (West)

ITS Project is being designed from Blackstone to SR99 (\$4.2 mil)



Clovis Ave

ITS Project is being designed from Dakota to American (\$3.1 mil)



Willow Ave

ITS Project is being designed from Ashlan to Shepherd (\$1.4 mil)



Fresno Street

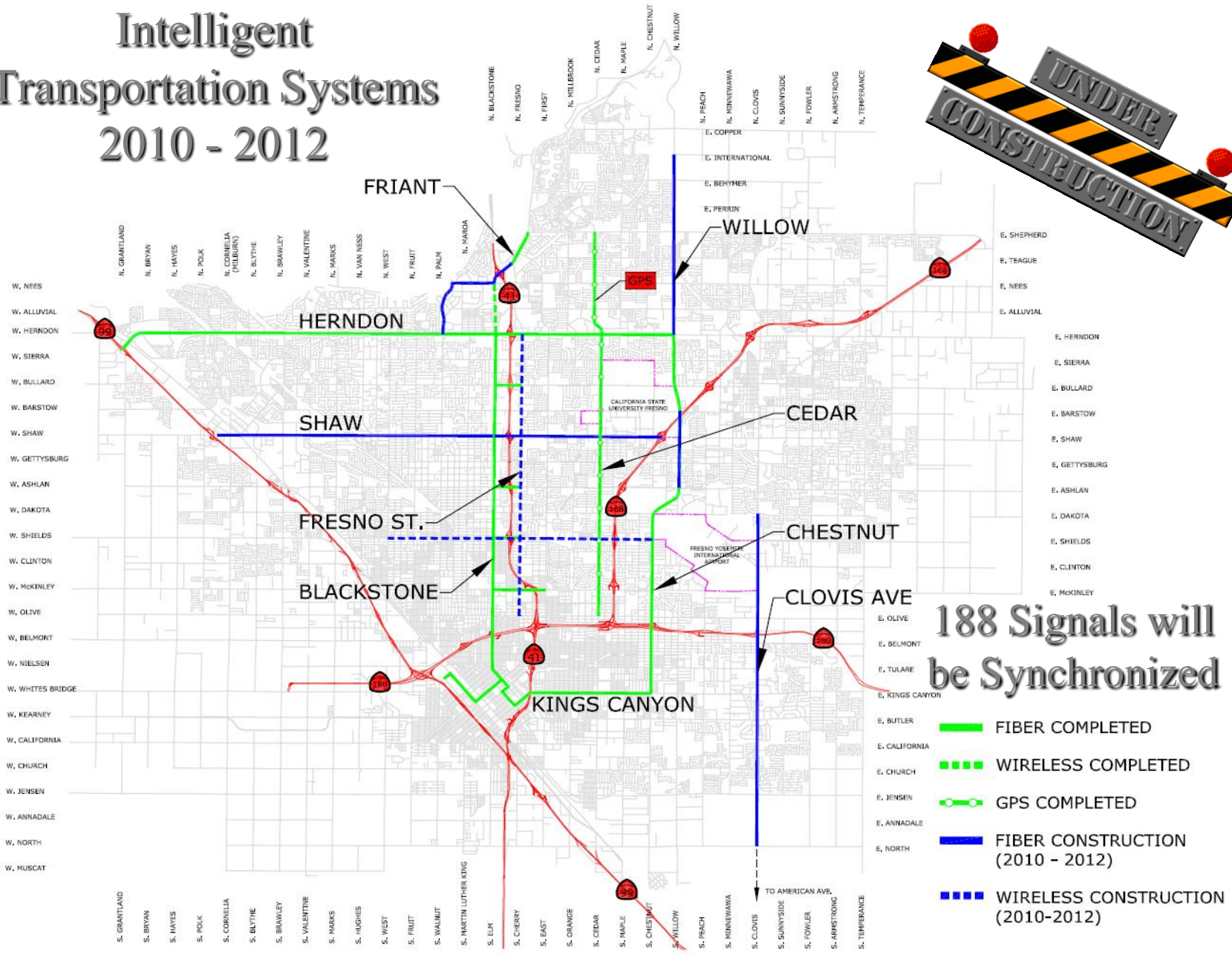
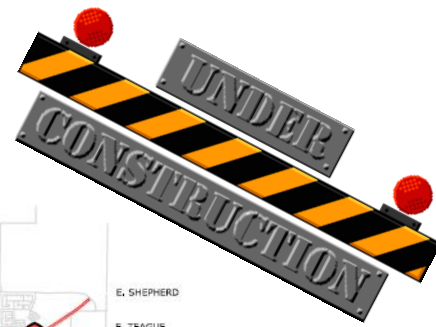
ITS Wireless Project is awarded from Olive to Herndon (\$0.22 mil)



Palm-Nees-Friant

ITS Project is awarded from Herndon & Palm-Nees-Friant to Shepherd (\$1 mil)

Intelligent Transportation Systems 2010 - 2012



Intelligent Transportation Systems

ITS Wireless Projects - 2013 to 2015!



Air Quality Grants Awarded for Wireless!



First Street

Nees to Ventura (\$1.5 mil)



West Ave

Herndon to McKinley (\$480 k)



Nees Ave

Palm to Willow (\$450 k)



Bullard Ave

Marks to Willow (\$790 k)



Ashlan Ave

Blackstone to Peach (\$650 k)



Shields

West to Chestnut (\$1 mil)



McKinley Ave

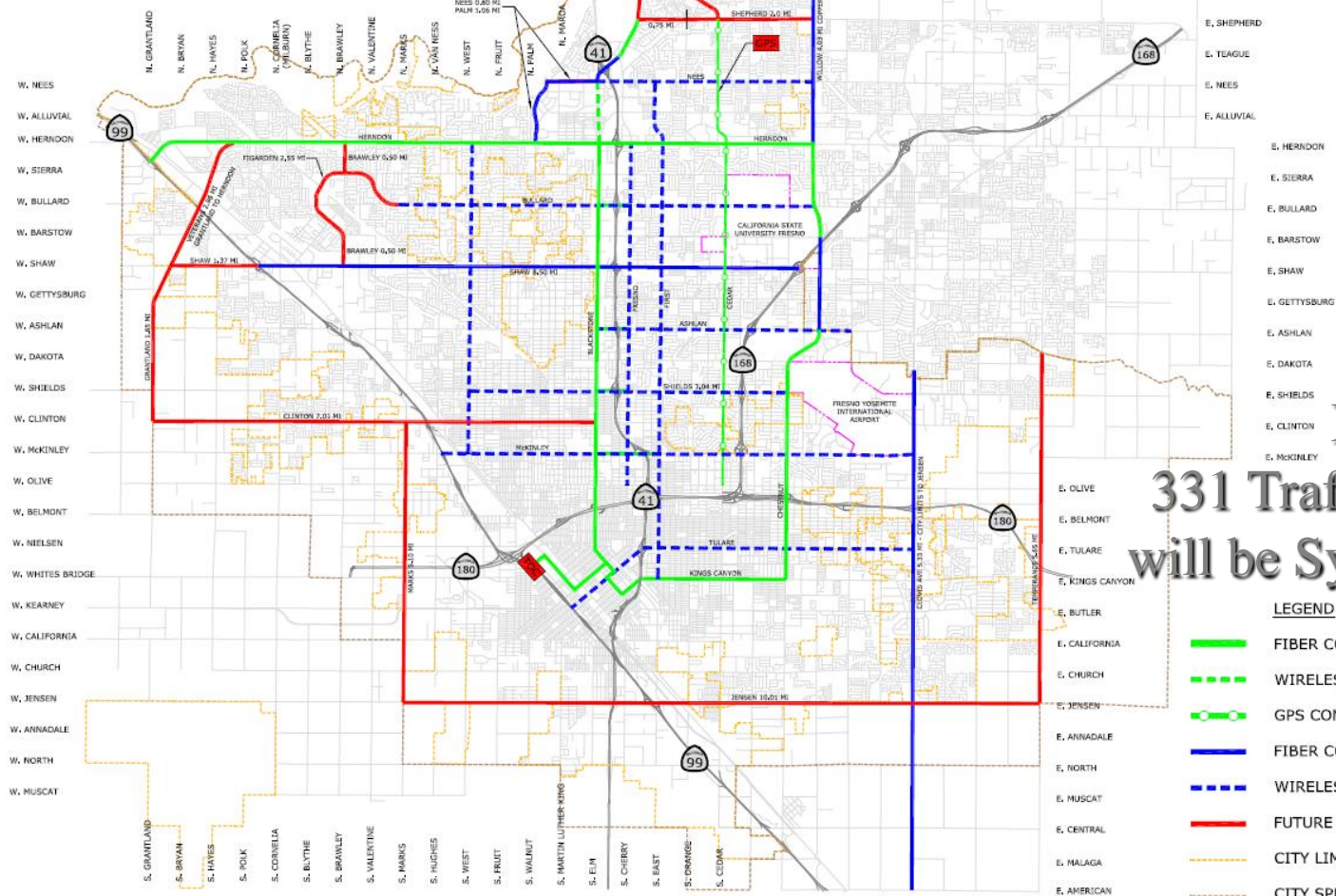
State Route 99 to Clovis Ave (\$850 k)



Tulare Ave

Downtown C Street to Clovis Ave (\$750 k)

Intelligent Transportation Systems 2010 - 2015



By 2015,
331 Traffic Signals
will be Synchronized

LEGEND

- FIBER COMPLETED
- WIRELESS COMPLETED
- GPS COMPLETED
- FIBER CONSTRUCTION (2010-2012)
- WIRELESS CONSTRUCTION (2013-2014)
- FUTURE FIBER MASTER PLAN (2010-2025)
- CITY LIMITS
- CITY SPHERE

Intelligent Transportation Systems

The City's ITS Program – Future!



ITS Operations & Maintenance Program is staffed.



ITS Capital Program future is very positive with



\$23.2 million from development impact fees
as the City's General Plan is built out.



\$18.2 million from Air Quality and Traffic Light
Synchronization Grants (2010-2015).



What is next?

Intelligent Transportation Systems

The City's ITS Program – Future!



ITS Program's Mission!



The Fiber Network Backbone will soon be completed, synchronizing 159 Traffic Signals.



The Wireless Interconnect will build 9 corridors, synchronizing 172 additional Traffic Signals.



ITS Program is now seeking Air Quality Grants for the City's remaining 169 Traffic Signals.





Intelligent Transportation Systems

Program – Benefits!






Emissions Reductions - Blackstone and Herndon

 Carbon (CO)	300 Metric Tons
 Nitrogen Oxides (NOx)	60 Metric Tons
 Volatile Organic Compounds (VOC)	75 Metric Tons



Quality of Life

-  Travel time reductions are up to 18%
-  Herndon Synchro model shows 1.5 million gallons of fuel savings annually
-  Blackstone Synchro model shows 0.85 million gallons of fuel savings annually

Intelligent Transportation Systems

Questions?

